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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/817,601

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I-pieng Peter Kao

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EXAMINER

SURYAWANSHI, SURESH

ART UNIT

PAPER NUMBER

2115

DATE MAILED: 07/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/817,601

Applicant(s)

KAO, I-PIENG PETER

Examiner

Suresh K. Suryawanshi

Art Unit

2115

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/2/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

1. Claims 1-45 are presented for examination.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-12, 17-26, 31-33 and 38-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Hubacher et al (US Patent 6,748,525; hereinafter Hubacher).

5. As per claim 1, Hubacher discloses a method of performing boots for multiple, interconnected computer systems [Fig. 1 and 1a], the method comprising :

notifying an intelligent endpoint of a boot event for a computer system, the intelligent endpoint being connected to one of the computer system [Fig. 1; a boot control workstation; Fig. 1a; a boot control server 104; col. 1, lines 9-15; col. 2, lines 30-62; col. 3, lines 4-51; col. 5, lines 15-34; col. 11, line 61 -- col. 12, line 6; col. 14, lines 20-41]; and

deciding on an action for the boot event using the intelligent endpoint, wherein the action may affect or depend on a boot of another computer system [Fig. 7; col. 1, lines 9-15; col. 2, lines 30-62; col. 3, lines 4-51; col. 5, lines 15-34; col. 11, line 61 -- col. 12, line 6; col. 14, lines 20-41].

6. As per claim 17, Hubacher discloses an intelligent endpoint being connectable to a computer system and at least one other computer system via a fabric [Fig. 1; a boot control workstation; Fig. 1a; a boot control server 104], the intelligent endpoint comprising :

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a boot manager for assisting a booting platform of each of the computer systems [Fig. 1, 1a and 7; col. 1, lines 9-15; col. 2, lines 30-62; col. 3, lines 4-51; col. 5, lines 15-34; col. 11, line 61 -- col. 12, line 6; col. 14, lines 20-41; a boot control program (BOOTCONTROL) in the boot control workstation or the boot control server]; and

boot intelligence for storing information regarding boots of the computer systems [Fig. 1, 1a and 7; col. 1, lines 9-15; col. 2, lines 30-62; col. 3, lines 4-51; col. 5, lines 15-34; col. 11, line 61 -- col. 12, line 6; col. 14, lines 20-41; the boot control workstation or server will supply the boot program to the requesting computer system].

7. As per claim 31, Hubacher discloses a computer system comprising :

a booting platform for a computer [Fig. 1 and 7; local workstation; col. 7, lines 12-19];
and

an intelligent endpoint operatively coupled to the computer via a system fabric [Fig. 1; a boot control workstation; Fig. 1a; a boot control server 104], the intelligent endpoint managing at least a portion of a boot of the computer [Fig. 1, 1a and 7; col. 1, lines 9-15; col. 2, lines 30-62; col. 3, lines 4-51; col. 5, lines 15-34; col. 11, line 61 -- col. 12, line 6; col. 14, lines 20-41; the boot control workstation or server will supply the boot program to the requesting computer system].

8. As per claims 2, 19 and 39, Hubacher discloses that the boot event relates to platform configuration [col. 1, lines 23-30; col. 2, lines 30-65].

9. As per claims 3, 20 and 40, Hubacher discloses that the intelligent endpoint can determine which components in the computer system to boot and in what order the components should be booted [col. 1, lines 23-30; col. 2, lines 30-65; col. 11, lines 13-18].

10. As per claims 4, 21 and 41, Hubacher discloses that the boot event relates to multi-medium configuration [col. 7, lines 12-38].

11. As per claims 5, 22 and 42, Hubacher discloses that the intelligent endpoint could assist in decision-making based on protocols for a specific medium [Fig. 1, 1a and 7; col. 1, lines 9-15; col. 2, lines 30-62; col. 3, lines 4-51; col. 5, lines 15-34; col. 7, lines 12-38; col. 11, line 61 -- col. 12, line 6; col. 14, lines 20-41; the boot control workstation or server will supply the proper boot program and files to the requesting computer system based on protocols for a specific medium].

12. As per claims 6, 23 and 43, Hubacher discloses that the boot event relates to file system and image format [col. 1, lines 18-30; col. 5, lines 38-40].

13. As per claims 7, 24 and 44, Hubacher discloses that the intelligent endpoint can determine which primitive structures are used and how the primitive structures are organized [Fig. 1, 1a and 7; col. 1, lines 9-15; col. 2, lines 30-62; col. 3, lines 4-51; col. 5, lines 15-34; col. 7, lines 12-38; col. 11, line 61 -- col. 12, line 6; col. 14, lines 20-41; inherent to the system as the boot control workstation or server provides the client with proper boot sequence of components in the client].

14. As per claims 8, 25 and 45, Hubacher discloses that the boot event relates to post-boot considerations [col. 2, lines 30-55].

15. As per claim 9, Hubacher discloses that post-boot considerations can include proper version control and protection [col. 10, line 62 -- col. 11, line 4].

16. As per claims 10 and 26, Hubacher discloses that notifying the intelligent endpoint includes communicating over a system bus or a system fabric [Fig. 1 and 1a].

17. As per claim 11, Hubacher discloses that the system bus or the system fabric conform to the PCI Express specification [Fig. 1 and 1a].

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18. As per claim 12, Hubacher discloses using a boot manager in the intelligent endpoint to access boot intelligence [Fig. 1, 1a and 7; col. 1, lines 9-15; col. 2, lines 30-62; col. 3, lines 4-51; col. 5, lines 15-34; col. 11, line 61 -- col. 12, line 6; col. 14, lines 20-41; a boot control program (BOOTCONTROL) in the boot control workstation or the boot control server].

19. As per claims 18 and 38, Hubacher discloses that the boot manager is coupled to receive a boot event from the booting platform [Fig. 1, 1a and 7; col. 1, lines 9-15; col. 2, lines 30-62; col. 3, lines 4-51; col. 5, lines 15-34; col. 11, line 61 -- col. 12, line 6; col. 14, lines 20-41; the boot control workstation or server will supply the boot program to the requesting computer system].

20. As per claim 32, Hubacher discloses that the booting platform includes a boot loader [col. 2, lines 6-7; col. 3, lines 15-16] and a boot agent [col. 3, lines 10-34; inherent to the system as to provide an interaction between the boot loader and the booting platform].

21. As per claim 33, Hubacher discloses that the intelligent endpoint includes a boot manger [col. 3, lines 10-51; a boot control program (BOOTCONTROL) in the boot control workstation or the boot control server] and boot intelligence [col. 1, lines 9-15; col. 2, lines 30-62; col. 3, lines 4-51; col. 5, lines 15-34; col. 11, line 61 -- col. 12, line 6; col. 14, lines 20-41; inherent to the system as the system provides a centralized boot process].

Claim Rejections - 35 USC § 103

22. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

23. Claims 13, 27 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hubacher et al (US Patent 6,748,525; hereinafter Hubacher) in view of Cromer et al (US Patent 5,860,001¹; hereinafter Cromer).

24. As per claims 13, 27 and 34, Hubacher discloses the invention substantially. Hubacher does not disclose about a plurality of startup sequences. However, Cromer clearly discloses that a computer system could have a plurality of startup sequences [Fig. 6, 8, 9, 10 and 11; col. 1, lines 29-32; col. 2, lines 47-63]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cited references as both are directed to a computer system boot process. Moreover, the option of automate process of selection of a boot option based on a condition will certainly enhance the invention of Hubacher.

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25. Claims 14, 28 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hubacher et al (US Patent 6,748,525; hereinafter Hubacher) in view of Yoon et al (US Patent 6,088,794¹; hereinafter Yoon).

26. As per claims 14, 28 and 35, Hubacher discloses the invention substantially. Hubacher does not disclose about determining whether a plurality of hard disk drives are in normal state or in suspend state. However, Yoon clearly discloses [Fig. 5, 9; col. 2, lines 42-46; col. 3, lines 23-49]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cited references as both are directed to a boot process of a computer system. Moreover, clearly the option of selecting a hard disk drive for boot based on determination which one is in normal state and which one is in suspend state will enhance the invention of Hubacher to provide a more reliable and user friendly boot system.

27. Claims 15, 29 and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hubacher et al (US Patent 6,748,525; hereinafter Hubacher) in view of Davis (US Patent 5,937,063¹).

28. As per claims 15, 29 and 36, Hubacher discloses the invention substantially. Hubacher does not disclose about determining whether boot instructions are valid. However, Davis clearly discloses a secure boot process involving the step of boot instruction validation [Fig. 2; col. 3,

¹ Prior art cited by applicant in the information disclosure statement (dated 4/02/04).

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lines 40-52;]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cited references as both are directed to boot process of a computer system. Moreover, a routineer in the art would like to implement the validation of boot instruction for not only security purpose but also for a reliable boot process. Thus, clearly the centralized boot process of Hubacher will be benefited.

29. Claims 16, 30 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hubacher et al (US Patent 6,748,525; hereinafter Hubacher) in view of James, Jr. et al (US Patent 6,240,519¹; hereinafter James).

30. As Per claims 16, 30 and 37, Hubacher discloses the invention substantially. Hubacher does not disclose about re-programming a non-volatile memory storing boot instructions. However, James clearly discloses that it is known in the art that a flash memory can be re-programmed where the flash memory contains boot instructions [col. 1, lines 7-11; col. 1, line 40 -- col. 2, line 15; col. 2, lines 25-38]. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the cited references as both are directed to boot process of a computer system. Moreover, the knowledge of the secure boot re-programming of a non-volatile memory in a computer system will clearly be utilized in the centralized boot process of Hubacher. Thus, enhancing the invention of Hubacher with the facility of re-programming of a non-volatile memory storing boot instructions.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Suresh K. Suryawanshi whose telephone number is 571-272-3668. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas C. Lee can be reached on 571-272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

sks
July 7, 2006


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